

**GRANT & HACKH'S  
CHEMICAL  
DICTIONARY**

[*American, International, European and British Usage*]

*Containing the Words Generally Used in Chemistry,  
and Many of the Terms Used in the Related  
Sciences of Physics, Medicine, Engineering,  
Biology, Pharmacy, Astrophysics,  
Agriculture, Mineralogy, etc.*

*Based on Recent Scientific Literature*

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*Completely Revised and Edited by*

**ROGER GRANT**

*M.A., D. de l'U., Ph.D., C. Chem., M.R.S.C. Consultant*

**CLAIRE GRANT**

*M.B., B.S., M.R.C.P.E. Medical Practitioner*

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- norethisterone** BP name for norethindrone.
- norethynodrel**  $C_{19}H_{12}O_2 = 272.3$ . 17-Ethylyn-17-hydroxy-5(10)-estren-3-one. Enovid. A steroid, similar to progesterone, used in oral contraceptives.
- Norge salt peter** A Norwegian calcium nitrate fertilizer.
- norgestrel**  $C_{21}H_{28}O_2 = 312.5$ . dl-norgestrel. White powder, m.210, insoluble in water. A progesterone used in oral contraceptives (USP).
- Norgine** Algin. Trademark for an adhesive made by boiling seaweed with alkali and precipitating the filtered solution with acid.
- noric** The division of the Triassic system containing the limestones and dolomites with some clays and sandstones.
- Norit** Trademark for purified charcoal made from birch; used to decolorize and deodorize syrup, oils, and pharmaceutical products.
- norium** A supposed rare-earth metal from zircon; actually a mixture of rare-earth metals.
- norleucine**  $C_6H_{13}O_2N = 131.2$ . Caprine, glycoleucine,  $\alpha$ -amino-*n*-caproic acid,  $\alpha$ -amino- $\alpha$ -butylic acid, 2-aminohexanoic acid\*. An amino acid from the leucine fractions of proteins of the brain and of casein.
- norm** A theoretical standard. **n. system** In mineralogy, a system of classification of rocks based on their theoretical chemical compositions. Cf. mode.
- normal** (1) One plane or line perpendicular to another. (2) Describing a fixed standard or an established type, as a solution. (3) Prefix indicating: (a) a salt with all the available H atoms replaced; (b) an organic compound in its "normal" (as distinct from its "iso") form. (4)\* Describing a material containing as a major constituent a specified element with an atomic weight value that is not significantly different from its accepted value. Differences can arise from the source, artificial alteration, mutation, or rare geological occurrence of the material. (5) Average or mean. **n. distribution** See normal probability curve below. **n. element** A cell, used as standard of electromotive force. See cadmium cell. **n. glass** A glass whose composition can be represented by a definite chemical formula; as,  $6SiO_2 \cdot CaO \cdot Na_2O$ . **n. hydrocarbon** An aliphatic hydrocarbon with a straight carbon chain in its molecule and no side chains; as, *n*-pentane. **n. material** See normal (4) above. **n. pressure** Standard pressure. See s.t.p. **n.** probability curve **N.** distribution. Gaussian, error, bell, or frequency curve. Bell-shaped curve showing the probability of a value differing from the mean under normal (i.e., unbiased) conditions. Values of 1, 2, and 3 standard deviations from the mean value encompass 68.3, 95.5, and 99.7% of the results of a large population, respectively. The median, mean, and mode are identical for a symmetrical distribution. See histogram, leptokurtosis. **n. saline** See normal saline under saline. **n. salt** A salt in which all the hydrogen atoms of the acid have been replaced by a metal, or all the hydroxide radicals of a base replaced by an acid radical; e.g.,  $Na_2CO_3$  (normal salt),  $NaHCO_3$  (acid salt). **n. solution** A solution that contains one equivalent of the active reagent in grams, in one liter of the solution. The equivalent in grams is that quantity of the active reagent which contains, replaces, unites with, or in any way, directly or indirectly, brings into reaction 1 g of H.
- $1\text{ N HCl} = 36.5\text{ g HCl/liter} = 1\text{ M HCl}$
- $1\text{ N H}_2\text{SO}_4 = 49\text{ g H}_2\text{SO}_4/\text{liter} = 0.5\text{ M H}_2\text{SO}_4$
- Weaker or stronger solutions are indicated thus: 0.5 N, 2 N, etc., the prefix being the normality. Cf. centinormal, millinormal, supernormal. **n. state** Ground state.
- n. temperature** Room temperature:  $20^\circ\text{C}$ . Cf. standard temperature ( $0^\circ\text{C}$ ). **n. thermometer** A standardized thermometer.
- normality** See normal solution under normal.
- normalization** (1) The process of restoring normality. (2) The treatment of milk after pasteurization to disperse the fat homogeneously throughout it.
- normalizing** The treatment of metals (especially aluminum alloys) with a molten mixture of sodium and potassium nitrates at  $500^\circ\text{C}$ .
- normethane** Isopropylcyclohexane.
- nornicotine**  $C_9H_{12}N_2 = 148.2$ . 3-(2-Pyrrolidinyl)pyridine. (S)-~ In Kentucky tobacco.
- noropianic acid**  $C_8H_6O_5 = 182.1$ . 5,6-Dihydroxy-1,2-phthalaldehydic acid. Colorless crystals, m.171, soluble in alcohol.
- norpinane** Trinorpinane\*. dimethylmethylen~  $\beta$ -Pinene\*.
- norpinic acid**  $C_8H_{10}O_4 = 170.2$ . 2,2-Dimethyl-1,3-cyclobutanedicarboxylic acid\*. Cf. truxillic acid.
- Norris, Flack James (1871-1940)** American chemist, noted for organic research.
- Norrish, Ronald George Wreyford (1897-1978)** British chemist, Nobel prize winner (1967). Noted for work on reaction mechanisms.
- norsolanellic acid** Biloidanic acid.
- Northylen** Trademark for a polythene synthetic fiber.
- nortriptyline hydrochloride**  $C_{19}H_{21}N \cdot HCl = 299.8$ . Aventyl. Bitter, white crystals, soluble in water, m.218, an antidepressant in the tricyclic group (USP, BP).
- nortropinone**  $C_7H_{11}ON = 125.2$ . 8-Azabicyclo[3.2.1]octan-3-one. A ketone derived from tropine by oxidation. Colorless powder, m.70.
- norvaline**  $C_5H_{11}O_2N = 117.1$ . 2-Aminopentanoic acid\*. A protein amino acid, m.291.
- Norwegian salt peter** Norge salt peter.
- noscapine**  $C_{22}H_{25}O_7N = 413.4$ . Narcotine, Tusscapine. An alkaloid from opium. Colorless needles, m.176, insoluble in water. A cough suppressant (USP, EP, BP). Cf. cotarnine.
- nosepiece** A revolving disk on a microscope, into which the objectives are screwed.
- nosology** The classification of disease.
- nostrum** A cure-all, or quack medicine.
- notalin** Citrinin.
- notation** A system of numerals and symbols which indicate the structural characteristic of an organic compound. See under individual symbols and formula, nomenclature.
- International Chemical ~**, Dysonian ~ A tentative method for delineating the structures of organic compounds independently of national languages; published by IUPAC, 1958. It used a cipher or line of capital letters, numbers, stops, or symbols, each feature of the formulas being described as a distinct operation separated from the others by stops. Thus, unsaturation was denoted by E, with (e.g.) E3 for a triple bond; methane was C. Rosanoff ~ A n. for representing sugars. The -CHO group is a circle, the main C chain a vertical line, each -OH group a horizontal line, and the 'tail' the -CH<sub>2</sub>OH group. Thus, xylose:



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